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Background: Professionalism may be different over time, as it is somewhat dependent on cultural norms. The purpose was to describe the perceptions of professionalism among individuals from all communities in a college of pharmacy in the midwestern United States. A secondary objective was for students in a research course to develop and analyze a survey.

Methods: We developed a 36-item survey including 8 scenarios based upon professionalism concepts such as integrity and dependability. The census of the college was sent an online survey, and potential respondents included students (BS, PharmD, MS, PhD), staff, and faculty. The survey contained demographic questions and 3 questions for 8 scenarios. Three scenarios also included open-ended questions. The extent to which the behavior in the scenario was unprofessional to professional (5-point scale), frequency of observing/doing the behavior (none to always), and confidence to perform behavior or learn from situation (not confident to fully confident) were assessed. Descriptive statistics were calculated, and the scenarios will be analyzed by type of respondent.

Results: To date, 137 of 794 have responded. Respondents were on average 34.7 (standard deviation 12.6) years of age, 72.4% female, and BS/PharmD students were 30.7%, graduate students were 20.4%, staff were 27.7% and faculty were 21.2% of respondents. The scenario of Failing to cite use of ChatGPT showed the lowest average unprofessional rating (1.53, std 1.0) and scenario of Getting to know colleagues from another culture (4.74, std 0.65) showed the highest average professional rating. A statistically significant difference by type of respondent was shown for Failing to cite ChatGPT ($p=0.049$), with faculty finding this most unprofessional and students finding it less unprofessional.

Conclusions: Professionalism in a midwestern pharmacy school was determined across 8 scenarios. Additional analyses will explore differences across all scenarios by type of respondent and mixed methods integration will be done for three scenarios.

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Abstract 114

Differences in vaccination hesitancy between the native and ethnic minority populations: A questionnaire survey in Denmark

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Background: In Denmark, COVID-19 vaccination coverage was lower in areas with many residents from ethnic minority backgrounds. This study aimed to investigate vaccination hesitancy among the native and Arabic minority populations in Denmark.

Methods: A cross-sectional questionnaire survey was conducted, utilizing validated versions of the Danish and Arabic translations of the Vaccination Attitudes Examination (VAX) scale, which in this study referred separately to COVID-19 and all other vaccines. The VAX scale includes four subscales addressing: 1) mistrust of vaccine benefits, 2) concerns about unforeseen future effects, 3) worries about commercial profiteering, and 4) preference for natural immunity. Participants express their level of agreement using a 6-point Likert scale, where higher scores indicate more hesitancy. Data were collected in January 2023 through selected Facebook groups using an online survey system. Descriptive and multivariate linear regression analyses (the latter with attitude scores as outcome variables and ethnicity alongside sociodemographic variables as covariates) were performed.

Results: Out of a total of 124 respondents, 35% were of Danish, 51% of Arabic and 14% of other ethnic heritage; 56% were females, 83% were fully vaccinated. Danish respondents were younger than Arabic (mean age, respectively, 35 vs. 48 years, $p<0.001$). Hesitancy toward both COVID-19 and all other vaccines was higher among Arabic respondents compared to Danish. The mean overall score for COVID-19 VAX was, respectively, 2.1 vs. 3.4 (adjusted $p<0.001$); the mean overall score for all other vaccines' VAX was, respectively, 2.0 vs. 3.1 (adjusted $p<0.001$). In all groups, the highest scores concerned unforeseen future events, the lowest scores were related to concerns about commercial profiteering.

Conclusions: There is greater hesitancy towards vaccination among the Arabic

minority compared to the native population in Denmark, which may partly explain variations in COVID-19 vaccination coverage. More efforts are needed to understand and address negative vaccination attitudes among ethnic minorities in Denmark.

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Abstract 104

MedSMART Adventures in PharmaCity Game: Youth Experiences and Recommendation for Use in Opioid Safety Education

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Background: Adolescents are often excluded from the creation of opioid safety interventions; therefore, it is crucial to design evidence-based interventions tailored for and with youth. Video games are ubiquitous and approachable to adolescents making them an accessible educational modality. MedSMART: Adventures in PharmaCity is a serious game that educates adolescents and their families on the safe, appropriate, and responsible use of opioid prescriptions.

Methods: The first objective of the study was to elucidate adolescents' experiences and perceptions of the game. The second objective was to elicit their recommendations for use and suggestions for improvement. Adolescents were recruited through Qualtrics research panels, social media, listservs, and snowball sampling. Recruitment occurred between April 2021 and October 2021. Eligible adolescents played the game and completed a follow-up virtual semi-structured interview with a study team member. Interviews were transcribed verbatim and uploaded to NVivo for data analysis. A thematic content analysis was performed. A total of seventy-two adolescents participated.

Results: Analysis yielded four themes: prior gaming experience, educational salience, game design impressions, and recommendations for improvement. Most adolescents approached MedSMART with prior gaming experience. The youth correctly identified the game's intended objective: the promotion of opioid medication safety. Adolescents had overwhelmingly positive impressions of the game's levels, characters, and graphics. Study participants suggested expanded game levels, improved controls, and more instructions for gameplay.

Conclusions: The overall findings from the study demonstrate that an overwhelming number of adolescent participants favored using MedSMART as an educational tool to prepare adolescents for real-world scenarios involving opioids and other medications. Opioid hospitalizations and mortality may be prevented by tailoring drug safety education to a platform which adolescents will enjoy. The youth reported the MedSMART serious game as being acceptable, useful, enjoyable, and educational.

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Abstract 111

Consumer Likelihood to Seek Information: OTC Medicines

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Background: There is continuing uncertainty in whether the public use OTC medicines with the due diligence they require. Given the fact they are accessible without a prescription, there are some who feel these medicines are very low, or even without, risk. Objective. The objective was to quantify the likelihood people would seek information on OTC medicines, in relation to 10 non-drug products. This was done as a proxy measure for the importance consumers place on them. **Methods:** Citizens of one Canadian province estimated the likelihood (scale of 1 to 10) they would search for information when considering a purchase. The survey had two lists – a MIXED products list (five OTC medicine categories and 10 non-drug products) and an OTC MEDICINES list (15 categories).

Results: Five hundred and seventy-five surveys were obtained (response rate 19.2 percent). The average age was 63.0 years, 61.6 percent were female, while the education level of respondents was particularly high. The mean search likelihood for the 15 products on the MIXED list ranged from 2.2 to 7.4. There

was more intention to search for information involving OTC medicines (mean = 5.0) than non-drug products (mean = 4.1). Product familiarity had a role in search likelihood.

Conclusions: This study revealed that the likelihood of searching for information prior to purchasing OTC medicines is not particularly robust. With a plethora of information currently available to consumers, motivation to access it is what may need attention.

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Abstract 117

Infertility information seeking and self-management in men

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Background: Medical treatment for infertility, such as intrauterine insemination or assisted reproductive technology, may have adverse health consequences for both women and their newborns. To mitigate the necessity for infertility treatments in women, men are advised to enhance their sperm quality through adopting a healthy diet, quitting smoking, reducing alcohol intake, engaging in exercise, and avoiding excessive heat, however, the self-management of infertility problems in men remains inadequately researched. This study aimed to investigate when and how men become aware of their infertility, if they seek information, and what changes they undergo after realizing the problem.

Methods: A cross-sectional questionnaire survey, targeting Danish men with infertility problems and their female partners, was developed with the assistance of health professionals specializing in infertility. It was then distributed through social media channels related to infertility treatment. Data were analyzed descriptively.

Results: Responses from a total of 74 participants were analyzed; 47% were from men's female partners, 72% of men were in the 26-35 age group, 50% had a university education. Half of the men contacted the healthcare system with suspected infertility after a year of attempting to conceive, 76% started at general practice. The majority initiated the search for information about infertility in collaboration with their partners, and only 3% started the search independently. Information about existing medical treatments for infertility was sought by 58%, while information about alternative treatments was sought by 37%. Changes in diet were most frequently perceived as relevant and implemented by men to improve fertility, 61% took dietary supplements, with fish oil and vitamin D being the most frequently mentioned.

Conclusions: A minimal number of men take the initiative to seek information about their infertility. Information about lifestyle changes targeting male infertility, such as specific dietary supplements, needs to be actively disseminated, including among men's female partners.

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Abstract 122

Two Spirit Peoples' Experiences Accessing and Receiving Care in Community Pharmacies

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Background: Two Spirit people face unique challenges in accessing and receiving healthcare in Canada. The Canadian healthcare system is embedded with homophobia, transphobia, heteronormativity, and racism due to colonization which impedes appropriate care for Two Spirit peoples. Coupled with a lack of representation and lack of programming, these issues have resulted in a lack of awareness and understanding of the obstacles faced by Two Spirit individuals in the Canadian healthcare system. This project aimed to gain knowledge about the experiences of Two Spirit peoples in accessing and receiving care in community pharmacy settings in Canada. Currently, there is no published information on this

topic.

Methods: A total of 21 Two Spirit participants were asked to share their stories in a focus group. To gain insight into experiences from across Canada, four different focus groups were held in various geographic locations (Vancouver, Edmonton, Saskatoon, Toronto). Informed by Indigenous methodologies, data was recorded via audio-recordings of the various focus groups. The audio was then transcribed and analyzed for themes using the Voice-Centred Relational method.

Results: The gifted stories produced three major recurring themes. All stories shared had connections to at least one of the following structural systems: white supremacy, heteronormativity, and capitalism. These structural processes presented themselves as racism, lack of time and greed, lack of knowledge, and homophobia/transphobia. Participants expressed positive experiences when they felt the pharmacist and themselves had a relationship, their Traditional Medicines were valued, or when they were white-passing or straight-passing. The participants also emphasized avoiding pharmacies due to poor experiences with healthcare professionals (physicians, nurses, pharmacists) in the past. Many suggestions to improve experiences in pharmacies were shared. Some include using inclusive language, adding pronouns and preferred names to patient files, incorporating queer and Indigenous education into pharmacy schools, and educating oneself on what Two Spirit is.

Conclusions: Two Spirit Peoples face barriers when it comes to accessing and receiving care in community pharmacies due to various structural processes that exist in this country. This has resulted in many Two Spirit individuals avoiding healthcare to save themselves from unsafe and uncomfortable interactions.

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Abstract 127

Batch-Prepared Low-Dose Atropine Eye Drops Improve Satisfaction and Costs: a Cross-Sectional Study at King Chulalongkorn Memorial Hospital, the Thai Red Cross Society, Bangkok

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Background: Low-dose atropine eye drops (ATEs) is an effective novel therapy for myopia; however 0.01% commercial ATE formulation is unavailable. We compared the satisfaction and costs of 0.01% ATEs between single-compounded (A) and batch-compounded preparations (B) from the perspectives of King Chulalongkorn Memorial Hospital (KCMH) and the parents of pediatric patients.

Methods: We conducted a cross-sectional study including patients who had received at least three bottles of 0.01% ATEs prepared by each method at KCMH between June 2022 and January 2023. The 0.01% ATEs were prepared by diluting commercial 1% ATEs in hypromellose under a biological safety cabinet. In method A, the preparation was compounded in a segregated region when required with a 4-week beyond-use date refrigerated. In method B, the preparation was compounded in a cleanroom in advance (40 bottles/batch) with a 12-week beyond-use date refrigerated. Twenty-six parents of pediatric patients and six compounding pharmacists completed a 5-point Likert scale satisfaction survey and selected their preferred method. Cost-identification analysis, descriptive statistics, and independent t-tests were performed.

Results: All participants preferred batch-prepared ATEs. Twenty-five (96.2%) and 21 (80.8%) parents speculated that method B increased their compliance and decreased waiting time, respectively. All pharmacists agreed that method B was more cost-efficient, time-efficient, and more convenient. The mean waiting time was higher for method A than B (17.16 ± 9.33 vs. 11.54 ± 5.18 minutes; P < 0.05). Compared with Method A, Method B exhibited decreases of 61.31% (£103.00) and 37.25% (£47.50) in the cost and sale price, respectively. Method B decreased the parents' median nonmedication costs /refill by approximately 300 baht (interquartile ratio = £100, £605).

Conclusions: From the parents' and hospital's perspectives, batch-prepared 0.01% ATEs improved satisfaction and reduced costs relative to those of single-compounded ATEs. We recommend that preparation by method B be generally used.

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